

Appl. No. 10/038,575
Amendment dated March 10, 2004
Reply to Office Action of December 10, 2004

Amendment to the Claims:

The listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claims 1 and 2. (canceled).

Claim 3. (currently amended): The method of claim [[2]] 48, wherein said engaging step is carried out prior to said unlocking step.

Claim 4. (canceled).

Claim 5. (currently amended): The method of claim [[1]] 48, further comprising the step of moving the first knife to a predetermined position relative to the holder subsequent to said unlocking step and prior to completion of said removing step.

Claim 6. (original): The method of claim 5, wherein said removing step includes placing a withdrawing unit for the first knife opposite the first knife not later than when the first knife occupies said predetermined position.

Claim 7. (currently amended): The method of claim [[1]] 48, further comprising the step of interrupting the operation of the severing unit at least in the course of said removing step.

Claim 8. (original): The method of claim 7, further comprising the step of maintaining the first knife at least close to a predetermined position at the time of initiation of said removing step.

Claim 9. (original): The method of claim 8, wherein said removing step includes placing a withdrawing unit for the first knife opposite the first knife not later than when the first knife occupies

said predetermined position.

Claim 10. (currently amended): The method of claim [[1]] 48 of replacing a first knife which is subject to wear during operation of the severing unit, further comprising the steps of monitoring the extent of wear upon the first knife during operation of the severing unit and initiating said removing step when the wear upon the first knife reaches a predetermined value.

Claim 11. (currently amended): The method of claim [[1]] 48, further comprising the step of automatically locking the second knife in the holder upon completion of said introducing step.

Claim 12. (currently amended): The method of claim [[1]] 48, further comprising the steps of withdrawing the second knife from a storage facility for second knives and conveying the thus withdrawn second knife to a preselected position prior to said introducing step.

Claim 13. (original): The method of claim 12, wherein said conveying step includes moving the second knife along an at least partially linear path.

Claim 14. (original): The method of claim 12, wherein said conveying step includes moving the second knife along an at least substantially linear path.

Claim 15. (original): The method of claim 12, further comprising the step of transporting the knife holder to a position opposite said preselected position of the second knife prior to said introducing step.

Claim 16. (currently amended): The method of claim [[1]] 48, wherein the operation of the severing unit includes moving the knife holder and further comprising the step of interrupting the moving step preparatory to and in the course of said introducing step.

Claim 17. (original): The method of claim 16, further comprising the steps of withdrawing the second knife from a storage facility, conveying the thus withdrawn second knife to a preselected position prior to said introducing step, and transporting the knife holder to a position opposite the second knife in the preselected position of the second knife.

Claim 18. (currently amended): The method of claim [[1]] 48, further comprising the step of locking the second knife in the knife holder upon completion of said introducing step.

Claim 19. (currently amended): The method of claim [[1]] 48, further comprising the step of maintaining, at the time of initiation of said removing step, the knife holder at least close to a predetermined position in which the second knife can be introduced into the knife holder upon completion of said removing step.

Claim 20. (currently amended): The method of claim [[1]] 48, further comprising the step of automatically carrying out at least one of said removing and introducing steps.

Claim 21. (original): The method of claim 20, wherein said step of automatically carrying out at least one of said removing and introducing steps is computerized.

Claim 22. (currently amended): The method of claim [[1]] 48, further comprising the step of automatically locking the second knife in the holder upon completion of said introducing step.

Claim 23. (currently amended): The method of claim [[1]] 48, further comprising the step of automatically carrying out at least one of additional steps including:

~~engaging the first knife prior to said removing step,~~

~~delivering the removed first knife to a disposing station for first knives,~~

moving the first knife to a predetermined position relative to the holder subsequent to said unlocking step and prior to completion of said removing step,

interrupting the operation of the severing unit at least in the course of said removing step,

maintaining the first knife at least close to a predetermined position at the time of initiation of said removing step,

monitoring the extent of wear upon the first knife during operation of the severing unit,

initiating the removing step when the wear upon the first knife reaches a predetermined value,

locking the second knife in the holder upon completion of said introducing step,

withdrawing the second knife from a storage facility for second knives,

conveying the withdrawn second knife to a predetermined position prior to said introducing step,

transporting the knife holder to a position opposite a preselected position of the second knife prior to said introducing step,

moving the knife holder during operation of the severing unit,

interrupting the movement of the knife holder preparatory to and in the course of said introducing step, and

maintaining - at the time of initiation of said removing step - the knife holder at least close to a predetermined position in which the second knife can be introduced into the knife holder upon completion of said removing step.

Claims 24-26. (canceled).

Claim 27. (currently amended): The apparatus of claim [[24]] 47, wherein said removing means includes means for clamping the first knife at least during removal of the first knife from the holder.

Claim 28. (currently amended): The apparatus of claim [[24]] 47 for replacing a first knife having a cutting edge, wherein said removing means comprises means for clamping the cutting edge of the first knife during removal of the first knife from the holder.

Claim 29. (original): The apparatus of claim 28, wherein said removing means further comprises means for moving said clamping means and the first knife along an at least partially linear path extending away from the holder.

Claim 30. (currently amended): The apparatus of claim [[24]] 47, further comprising means for engaging said locking means upon introduction of the second knife into the holder.

Claim 31. (original): The apparatus of claim 30, wherein said engaging means includes said disengaging means.

Claim 32. (currently amended): The apparatus of claim [[24]] 47, wherein said locking means comprises ~~a biasing member movable between first and second positions in which a knife is respectively locked in and removable from the holder, and further comprising means for moving the biasing member between said positions and means for conveying the second knife into the holder in the second position of said biasing member and upon removal of the first knife from the holder.~~

Claim 33. (original): The apparatus of claim 32, further comprising a storage facility for a supply of second knives, said conveying means being arranged to move discrete second knives seriatim from said storage facility to the holder.

Claim 34. (original): The apparatus of claim 33, wherein said conveying means comprises driven rollers arranged to advance second knives from said storage facility to the holder.

Claim 35. (original): The apparatus of claim 33, wherein said storage facility comprises resilient means for biasing second knives of supply against each other.

Claim 36. (currently amended): The apparatus of claim [[24]] 47, wherein said disengaging means includes means for releasably locking a second knife in the holder upon introduction of such second knife into the holder.

Claim 37-46. (canceled).

Claim 47. (previously presented): Apparatus for replacing a first knife, which is locked in a knife holder of a severing unit in a machine for severing partly finished smokers' products, with a second knife, comprising:

disengageable means for locking the first knife in the holder;

means for disengaging said locking means;

means for removing the first knife from the holder upon disengagement of said locking means; and

means for introducing the second knife into the holder upon removal of the first knife prior to reengagement of the locking means,

wherein said locking means comprises a biasing member movable between first and second positions in which a knife is respectively locked in and removable from the holder, said disengaging means comprising a displacing member and means for moving said displacing member relative to the holder to thus move said biasing member from said first to said second position thereof at least during removal of the first knife from the holder, and

wherein said biasing member comprises at least one roller and said displacing member comprises a reciprocable bolt.

Claim 48. (previously presented): A method of replacing an at least partially spent first knife

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having a cutting edge, which is locked in the knife holder of a severing unit that is operative to sever smokers' products, with a second knife, comprising the steps of:

automatically unlocking the first knife;

removing the first knife from the holder by grasping the cutting edge of the first knife; and introducing the second knife into the holder,

engaging the first knife prior to said removing step, said removing step including advancing the first knife along an at least substantially straight path and further comprising the step of delivering the removed first knife to and releasing the first knife on a disposing station for spent knives.